Work Order ID 102409 *102409*

May-28-13 8:50:57 AM

Item ID: D2893-1 **Accept** *N900040100* **Setup Start** *NS1* **Stop** *NS2*

Revision ID:

Item Name: 2.75 Support

Start Date: 5/27/13 **Start Qty:** 12.00 *12* **Cust Item ID:**

Required Date: 6/06/13 **Req'd Qty:** 12.00 *12* **Customer:**

Reference:

Run Start *NR1* **Stop** *NR2*

Approvals: **Process Plan:** MLS **Date:** 13-05-29 **Tooling:** ____ **Date:** ____

QC: ____ **Date:** ____ **SPC (Y/N):** ____ **Date:** ____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp

Draw Nbr	Revision Nbr
D2893	C

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Handwritten entries
100 *100* HAAS 1 HAAS CNC vertical machine #1	HAAS CNC VERTICAL MACHINING #1 **Memo** 1-Machine as per Folio FA081 2-Deburr	0.00 0.00	DAS 02 9-89 AT 13-06-23 ×12 13.6.25 DAS 04 9-89
110 *110* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB **Memo**	0.00 0.00	DAS 02 9-89 AT 13-06-23 13-6.25 DAS 04 9-89
120 *120* QC Quality Control	QC8- Inspect parts - second check **Memo**	0.00 0.00	SK 13-6-28 12

DQA: ________ Date: ______________

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: ______________	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**			
Part No. ______________	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. ______________	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
	Work Order Update ☐	Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data ☐									
Equip/Tooling ☐									
Operator ☐									
Material ☐									
Setup ☐									
Other ☐									
Process ☐									
Supplier ☐									
Training ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Grain	☐ Ovalized	☐ Pressure/Forced
☐ Centre Not Concentric to O/S	☐ BOM/Route	☐ Hardware	☐ Over/Under tolerance	☐ Temperature/Cure
☐ Cracks	☐ Broken/Damaged	☐ Inspection Incomplete	☐ Part Incorrect	☐ Weld
☐ Crushed/Crimped	☐ Burrs	☐ Instructions Incomplete/Unclear	☐ Part Lost/Missing	☐ Wrong Stock Pulled
☐ Cuffs	☐ Contamination	☐ Maintenance	☐ Part Moved	
☐ Heat Treat	☐ Countersink	☐ Mislabeled	☐ Positioned Wrong	
☐ Inspection Strip in Tube	☐ Cut Too Short	☐ Misread	☐ Power Loss/Surge	☐ Other
☐ Ripples in Bend	☐ Drill Holes	☐ Offset	______________	
☐ Torque Waves in Extrusion	☐ Drawing	☐ Out of Calibration	______________	
☐ Turning Sequence	☐ Finish	☐ Out of Sequence	______________	
☐ Wave/Twist in Tube	☐ Folio	☐ Outside Dimensions		

Work Order ID 102409 *102409*

May-28-13 8:50:57 AM

Item ID: D2893-1 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: 2.75 Support

Start Date: 5/27/13 **Start Qty:** 12.00 *12* **Cust Item ID:**

Required Date: 6/06/13 **Req'd Qty:** 12.00 *12* **Customer:**

Reference:

Run Start *NR1*

Approvals: **Process Plan:** ______ **Date:** ______ **Tooling:** ______ **Date:** ______

QC: ______ **Date:** ______ **SPC (Y/N):** ______ **Date:** ______ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* HandFXtube Hand Finishing Crosstubes	**Memo** Per note 8 on page 1 of dwg D2893, Prep inner concave surface of support and apply 3M Scotch-Weld as per dwg. 24h of cure time.	0.00 0.00				~~12~~ 12	~~Ø~~ Ø	~~Ø~~ Ø	~~AL 13-7-6~~ AL 13-7-6
140 *140* QC Quality Control	QC3- Inspect Part Finish **Memo**	0.00 0.00 13.7.8				12			
170 *170* Packaging Packaging	Identify as per dwg & Stock Location: LG52 **Memo**	0.00 0.00				12	Ø	Ø	AL 13-7-8

DQA: ________ Date: ____________

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: ________	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**			
Part No. ________	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. ________	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
	Work Order Update ☐	Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data ☐									
Equip/Tooling ☐									
Operator ☐									
Material ☐									
Setup ☐									
Other ☐									
Process ☐									
Supplier ☐									
Training ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	**General**			
☐ Bending	☐ Bend	☐ Grain	☐ Ovalized	☐ Pressure/Forced
☐ Centre Not Concentric to O/S	☐ BOM/Route	☐ Hardware	☐ Over/Under tolerance	☐ Temperature/Cure
☐ Cracks	☐ Broken/Damaged	☐ Inspection Incomplete	☐ Part Incorrect	☐ Weld
☐ Crushed/Crimped	☐ Burrs	☐ Instructions Incomplete/Unclear	☐ Part Lost/Missing	☐ Wrong Stock Pulled
☐ Cuffs	☐ Contamination	☐ Maintenance	☐ Part Moved	
☐ Heat Treat	☐ Countersink	☐ Mislabeled	☐ Positioned Wrong	
☐ Inspection Strip in Tube	☐ Cut Too Short	☐ Misread	☐ Power Loss/Surge	☐ Other ________
☐ Ripples in Bend	☐ Drill Holes	☐ Offset		________
☐ Torque Waves in Extrusion	☐ Drawing	☐ Out of Calibration		________
☐ Turning Sequence	☐ Finish	☐ Out of Sequence		________
☐ Wave/Twist in Tube	☐ Folio	☐ Outside Dimensions		

Work Order ID 102409
May-28-13 8:50:57 AM

102409

Item ID: D2893-1 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID:
Item Name: 2.75 Support **Stop** *NS2*

Start Date: 5/27/13 **Start Qty:** 12.00 *12* **Cust Item ID:**
Required Date: 6/06/13 **Req'd Qty:** 12.00 *12* **Customer:**
Reference:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** ________ **Date:** ________ **Tooling:** ________ **Date:** ________
QC: ________ **Date:** ________ **SPC (Y/N):** ________ **Date:** ________

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180*	QC21- Final Inspection - Work Order Release	0.00					13/7/8		
QC Quality Control	Memo	0.00							

MF
13-7-8

DQA: ________ Date: ____________

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: ______________ Part No. ______________ NCR No. ______________	**DISPOSITION** Rework ☐ Scrap ☐ Use-as-is ☐ Work Order Update ☐	**AGAINST DEPARTMENT/PROCESS** Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐ ☐

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data ☐									
Equip/Tooling ☐									
Operator ☐									
Material ☐									
Setup ☐									
Other ☐									
Process ☐									
Supplier ☐									
Training ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Grain	☐ Ovalized	☐ Pressure/Forced
☐ Centre Not Concentric to O/S	☐ BOM/Route	☐ Hardware	☐ Over/Under tolerance	☐ Temperature/Cure
☐ Cracks	☐ Broken/Damaged	☐ Inspection Incomplete	☐ Part Incorrect	☐ Weld
☐ Crushed/Crimped	☐ Burrs	☐ Instructions Incomplete/Unclear	☐ Part Lost/Missing	☐ Wrong Stock Pulled
☐ Cuffs	☐ Contamination	☐ Maintenance	☐ Part Moved	
☐ Heat Treat	☐ Countersink	☐ Mislabeled	☐ Positioned Wrong	
☐ Inspection Strip in Tube	☐ Cut Too Short	☐ Misread	☐ Power Loss/Surge	☐ Other ________
☐ Ripples in Bend	☐ Drill Holes	☐ Offset	________	
☐ Torque Waves in Extrusion	☐ Drawing	☐ Out of Calibration	________	
☐ Turning Sequence	☐ Finish	☐ Out of Sequence	________	
☐ Wave/Twist in Tube	☐ Folio	☐ Outside Dimensions		

Picklist Print

May-28-13 8:50:57 AM

Work Order ID: 102409

Parent Item: D2893-1

Parent Item Name: 2.75 Support

Start Date: 5/27/13 **Required Date:** 6/06/13

Start Qty: 12.00 **Required Qty:** 12.00

Comments:
IPP: C02.11.26Reformat; Added P/OKJ
IPP D 06.04.19 removed alodine EC
IPP Rev:E Added priming as per Rev B 07-04-30 JLM
IPP F 08.03.19 Re-format EC verified by: DD
IPP Rev:G 08-05-15 add QC14 DD verified by:EC IPP Rev:H 11.08.04 as per dwg
rev.C DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
DSK078 D2893-1 TURNING DETAIL		Manufactured	No			100	Each	16.0000	**0.5**	**6.3157896**			

Location	Loc Qty	Loc Code
MAT060	16	
101400	10	
93804	2	
96578	4	

DAS 02 8T 13-06-23 9-89

x6

DQA: ________ Date: ______________

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: ________________	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**			
Part No. ________________	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. ________________	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
	Work Order Update ☐	Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data ☐									
Equip/Tooling ☐									
Operator ☐									
Material ☐									
Setup ☐									
Other ☐									
Process ☐									
Supplier ☐									
Training ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Grain	☐ Ovalized	☐ Pressure/Forced
☐ Centre Not Concentric to O/S	☐ BOM/Route	☐ Hardware	☐ Over/Under tolerance	☐ Temperature/Cure
☐ Cracks	☐ Broken/Damaged	☐ Inspection Incomplete	☐ Part Incorrect	☐ Weld
☐ Crushed/Crimped	☐ Burrs	☐ Instructions Incomplete/Unclear	☐ Part Lost/Missing	☐ Wrong Stock Pulled
☐ Cuffs	☐ Contamination	☐ Maintenance	☐ Part Moved	
☐ Heat Treat	☐ Countersink	☐ Mislabeled	☐ Positioned Wrong	
☐ Inspection Strip in Tube	☐ Cut Too Short	☐ Misread	☐ Power Loss/Surge	☐ Other
☐ Ripples in Bend	☐ Drill Holes	☐ Offset		
☐ Torque Waves in Extrusion	☐ Drawing	☐ Out of Calibration		
☐ Turning Sequence	☐ Finish	☐ Out of Sequence		
☐ Wave/Twist in Tube	☐ Folio	☐ Outside Dimensions		

DART AEROSPACE LTD	Work Order:	102409
Description: Ø2.750 Support	Part Number:	D2893-1
Inspection Dwg: D2893 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	2.985	3.005		2.993	2.992	2.991	2.993	2.993
AB	0.440	0.460		.440	.440	.440	.440	.440
AC	0.125	0.160		.135	.130	.136	.136	.136
AD	0.040	0.060		.050	.050	.050	.050	.050
AE	0.188	0.193		.192	.192	.192	.192	.192
AF	0.125	0.160		.142	.140	.135	.141	.142
AG	0.140	0.160		.153	.153	.152	.154	.150
AH	1.360	1.400		1.372	1.368	1.368	1.369	1.372
AI	0.040	0.060		.056	.053	.052	.053	.054
AJ	1.190	1.230		1.215	1.214	1.216	1.211	1.215
AK	0.010	0.020		.012	.012	.012	.012	.012
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250
AN	2.518	2.538		2.528	2.528	2.528	2.528	2.528
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.262	.262	.262	.262	.262
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR								
AS								
AT								
			Accept/Reject					

Measured by: ET	Date: 13-06-23
Audited by:	Date: 13-6-28
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	
D	12.07.31	Dwg Rev updated	KJ	

DART AEROSPACE LTD	Work Order:	102409
Description: Ø2.750 Support	Part Number:	D2893-1
Inspection Dwg: D2893 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	6	7	8	9	10
HAAS Section								
AA	2.985	3.005		2.993	2.994	2.993	2.999	2.993
AB	0.440	0.460		.440	.443	.443	.440	.440
AC	0.125	0.160		.140	.135	.136	.150	.150
AD	0.040	0.060		.050	.050	.050	.050	.050
AE	0.188	0.193		.192	.192	.192	.192	.192
AF	0.125	0.160		.140	.142	.140	.143	.143
AG	0.140	0.160		.152	.148	.149	.153	.153
AH	1.360	1.400		1.368	1.371	1.370	1.377	1.373
AI	0.040	0.060		.051	.052	.055	.049	.047
AJ	1.190	1.230		1.211	1.214	1.214	1.217	1.220
AK	0.010	0.020		.012	.012	.012	.012	.012
AL	0.053	0.073		.063	.063	.063	.063	.063
AM	0.240	0.260		.250	.250	.250	.250	.250
AN	2.518	2.538		2.528	2.528	2.528	2.528	2.528
AO	84.39	90.39		87.39	87.39	87.39	87.39	87.39
AP	0.261	0.266		.262	.262	.262	.262	.262
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR								
AS								
AT								
			Accept/Reject					

Measured by:	[signature / stamp 04]	Date:	13-06-23
Audited by:	[signature]	Date:	13-62F
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	
D	12.07.31	Dwg Rev updated	KJ [initials]	[signature]

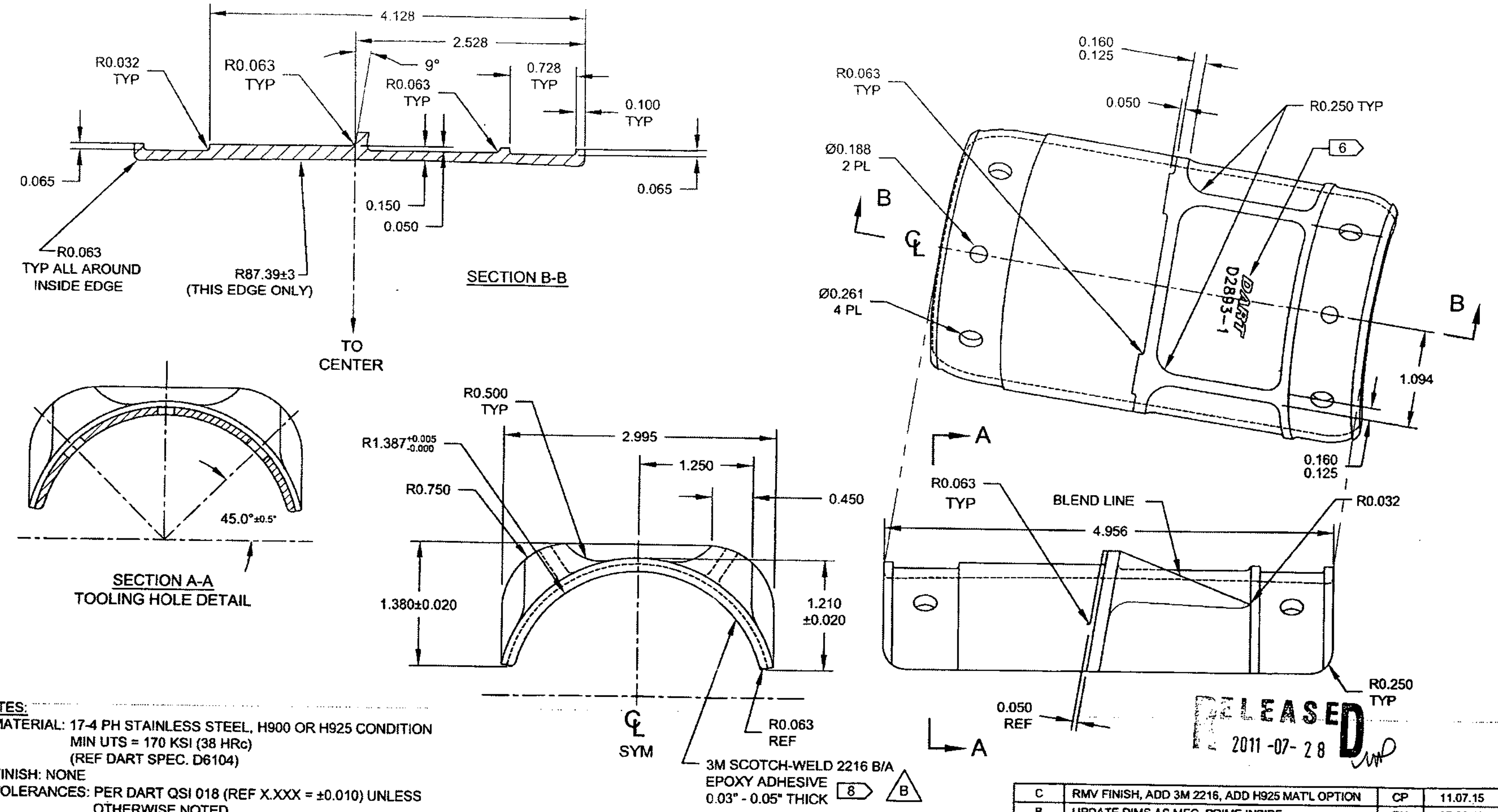
DART AEROSPACE LTD	Work Order:	102405
Description: Ø2.750 Support	Part Number:	D2893-1
Inspection Dwg: D2893 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	2.985	3.005		2.993	3.000			
AB	0.440	0.460		.440	.440			
AC	0.125	0.160		.150	.150			
AD	0.040	0.060		.050	.050			
AE	0.188	0.193		.192	.192			
AF	0.125	0.160		.143	.143			
AG	0.140	0.160		.153	.152			
AH	1.360	1.400		1.377	1.380			
AI	0.040	0.060		.2435	~~.050~~	.050		
AJ	1.190	1.230		1.211	1.218			
AK	0.010	0.020		.012	.012			
AL	0.053	0.073		.063	.063			
AM	0.240	0.260		.250	.250			
AN	2.518	2.538		2.528	2.528			
AO	84.39	90.39		87.39	87.39			
AP	0.261	0.266		.262	.262			
AQ	0.053	0.073		.063	.063			
AR								
AS								
AT								
			Accept/Reject					

Measured by:	[signature]	Date:	13.6.25
Audited by:	[signature]	Date:	13-6-25
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	
D	12.07.31	Dwg Rev updated	KJ [initials]	[signature]



RELEASED 2011-07-28

NOTES:

1) MATERIAL: 17-4 PH STAINLESS STEEL, H900 OR H925 CONDITION
MIN UTS = 170 KSI (38 HRc)
(REF DART SPEC. D6104)

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 (REF X.XXX = ±0.010) UNLESS
OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: DART LOGO (PER DART SUPPLIED GRAPHIC) AND PART
NUMBER IN THIS AREA WITH 0.125 HIGH LETTERING
0.010-0.020 DEEP, PER DART QSI 044 6.3.

7) WEIGHT: 0.78 lb

8) FOR THE ENTIRE INNER CONCAVE SURFACE:
ABRADE SURFACE WITH 400-GRIT SANDPAPER. REMOVE RESIDUE WITH MEK
(OR EQUIVALENT). APPLY 0.03" TO 0.05" THICK LAYER OF 3M SCOTCH-WELD 2216 B/A
ADHESIVE TO MATING SURFACE OF SUPPORT. ALLOW TO CURE FOR 24 HOURS.

REV.	DESCRIPTION	BY	DATE
C	RMV FINISH, ADD 3M 2216, ADD H925 MAT'L OPTION	CP	11.07.15
B	UPDATE DIMS AS MFG, PRIME INSIDE	PH	07.03.16
A	NEW ISSUE	CP	01.01.10

DESIGN		**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. D2893 — REV. C — SHEET 1 OF 1
MFG. APPR.		
APPROVED		TITLE Ø2.750 SUPPORT — SCALE NTS
DE APPR.		
DATE	11.07.15	

102409 MCJ
13-05-29.